

CLAIMS

1. An image recording method for causing an ink to adhere on a recording medium, which is provided with at least one ink-receiving layer on a base material, to form an image, characterized in that said ink is an inkjet recording ink composed of a high-molecular dispersant formed of a block copolymer comprising at least one hydrophobic block and at least one hydrophilic block, a water-insoluble colorant, a water-soluble organic solvent and water, said ink-receiving layer comprises fine inorganic particles and a water-soluble resin and/or water-dispersible resin, and a surface pH of said ink-receiving layer is controlled within a range of from 3.0 to 6.5.

2. An image recording method according to claim 1, wherein said ink-receiving layer further comprises cationic fine organic particles and a cationic polymer.

3. An image recording method according to claim 2, wherein a content of said cationic fine organic particles in said ink-receiving layer is from 0.1 to 25 wt.% based on a dry weight of said ink-receiving layer.

4. An image recording method according to claim 2, wherein a weight average molecular weight of said cationic fine organic particles is from 100,000 to 1,000,000.

5. An image recording method according to claim 2, wherein said cationic fine organic particles have a glass transition temperature of from 60 to 110°C.

6. An image recording method according to claim 2, wherein a weight average molecular weight of said cationic polymer is from 5,000 to 200,000.

7. An image recording method according to claim 2, wherein said cationic polymer is used in a proportion of from 0.05 to 5 wt.% based on said fine inorganic particles.

8. An image recording method according to claim 1, wherein said fine inorganic particles are made of at least one of silica, alumina and aluminium hydrate of the boehmite

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structure or pseudo-boehmite structure each of which has an average particle size of from 100 to 300 nm.

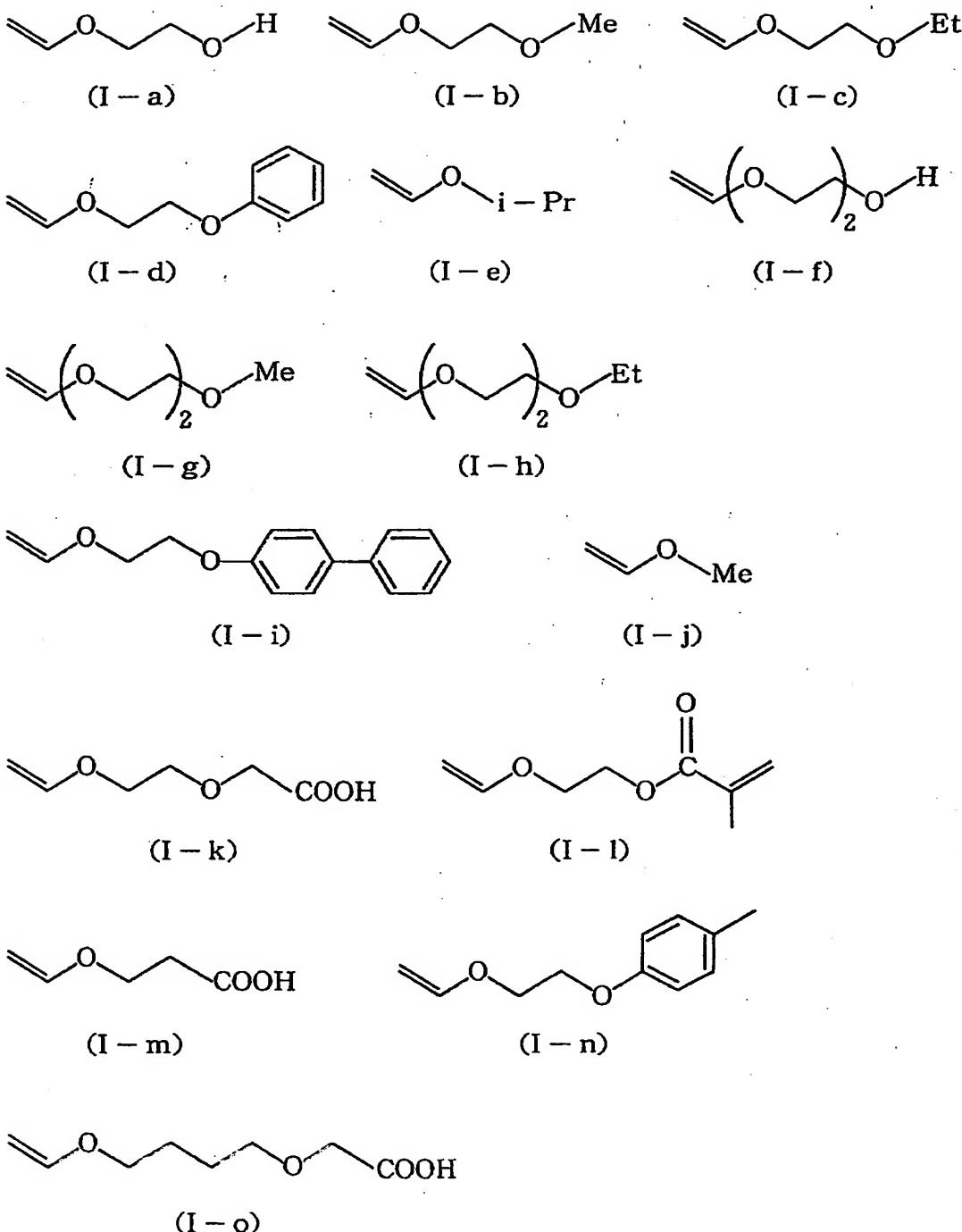
9. An image recording method according to claim 1, wherein said ink-receiving layer further comprises a water-soluble multivalent metal salt.

10. An image recording method according to claim 9, wherein said water-soluble multivalent metal salt is used in a proportion of from 0.1 to 10 wt.% based on said fine inorganic particles.

11. An image recording method according to claim 1, wherein said water-insoluble colorant is at least one water-insoluble colorant selected from the group consisting of pigments, oil-soluble dyes, vat dyes and disperse dyes.

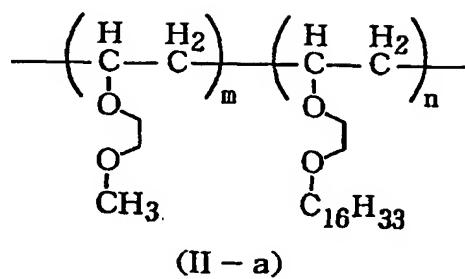
12. An image recording method according to claim 1, wherein said high-molecular dispersant is a block copolymer obtained by polymerizing vinyl ethers as monomers, and has pH stimulation responsibility such that high molecular chains of said block copolymer can undergo association when a pH of said ink is lowered.

13. An image recording method according to claim 1, wherein at least one of said monomers which make up said block copolymer is at least one monomer selected from vinyl ethers represented by the following formulas (I-a) to (I-o):

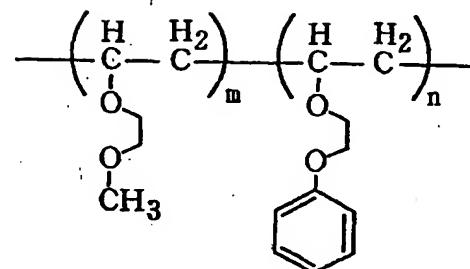


14. An image recording method according to claim 1, wherein said block copolymer is at least one block copolymer selected from block copolymers represented by the following formulas (II-a) to (II-e):

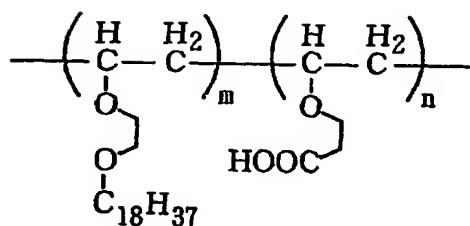
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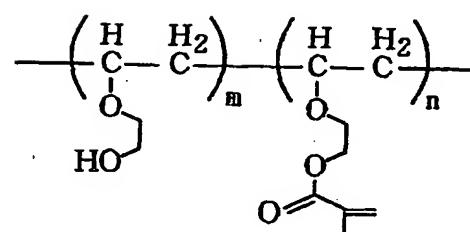
(II - a)



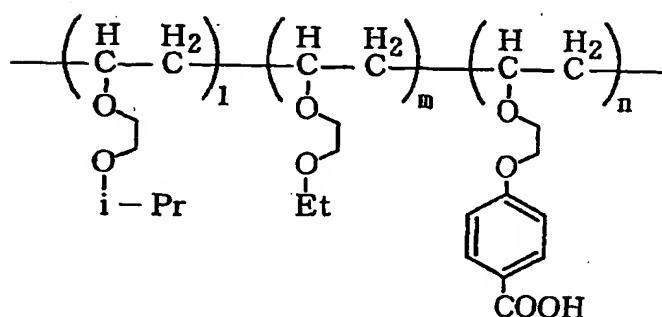
(II - b)



(II - c)



(II - d)



(II - e)

wherein m , n and l each independently denotes a value of from 1 to 10,000.

15. An image recording method according to claim 1,
5 wherein a number average molecular weight of said block copolymer is from 500 to 20,000,000:

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